KNN2/KNN (Q9L10)

53% (10/19)

✓ **1. KNN is**

- (A) data-driven method
- (B) model-driven method
- (C) I do not know

✓ **2. The dependent variable of the classification is**

- (A) categorical
- (B) numeric
- (C) I do not know

✓ **3. KNN can be used for regression**

- (A) Yes
- (B) No
- (C) I do not know

✓ **4. In the case of KNN classification we use**

- (A) average of outcomes
- (B) majority voting scheme
- (C) I do not know

✗ **5. Which of these errors will increase constantly by increasing k?**

- (A) train error
- (B) test error
- (C) both
- (D) I do not know

✗ **6. This function can be used to perform KNN classificationin R**

- (A) knn()
- (B) k_nn()
- (C) knnreg()
- (D) knearneib()
- (E) I do not know

✗ 7. With the increase of k, the decision boundary will be

- A simplified
- B more complex
- C I do not know
- D unchanged

✓ 8. KNN algorithm is sensitive to outliers

- A True
- B False
- C I do not know

✓ 9. KNN

- A is a supervised learning algorithm.
- B is an unsupervised learning algorithm.
- C I do not know

✗ 10. In the case of small k we have

- A overfitting
- B underfitting
- C it depends on the situation
- D I do not know

✓ 11. Why do we need scaling in KNN?

- A to avoid overfitting
- B to avoid underfitting
- C to have "equal" weights for variables
- D I do not know

✓ 12. Let k = n, (n- number of observations), K-NN is same as

- A random guessing
- B everything will be classified as the most probable class (in total)
- C everything will be classified as the least probable class (in total)
- D I do not know

✗ 13. This function can be used to perform K-NN regression in R

- A knn.reg
- B knnforreg
- C regknn
- D knnforregression
- E I do not know

✗ 14. Do you need to worry about scaling with one explanatory variable?

- A No
- B Yes
- C I do not know

✓ 15. n - the number of observation,
m - the number of explanatory variables

When n=k, m=1, the decision boundary for regression is

- A a line
- B a stepwise constant function
- C a stepwise quadratic function
- D I do not know

✓ 16. Which of these algorithms can be used to fill the missing values

- A KNN for regression
- B KNN for classification
- C both
- D I do not know

✗ 17. Which one is better: KNN regression or Linear regression ?

- A KNN outperform LR if the parametric form that has been selected is close to the true form of f
- B LR outperform KNN if the parametric form that has been selected is close to the true form of f
- C KNN will always outperform the LR
- D I do not know

✗ **18. Which one is the Disadvantage of KNN?**

- A required assumptions
- B cannot be applied for regression
- C difficult to perform
- D the problem of high dimensional data
- E I do not know

✗ **19. The best k for train set equals to**

- A 1
- B 2
- C 0
- D I do not know

⊘ **20. What is the Parzen window**

Kernel density estimation